07/26/2017 19:30 UTC

The following graphs represent the coordinated launch for Langley Research Center (LaRC; 37.1024, -76.3929) and the Chesapeake Bay Bridge Tunnel 3rd Island (CBBT; 37.0366, -76.0767) on 07/26/2017 at approximately 19:30 UTC. Wind at both sites came generally from the south/southwest. Preliminary analysis suggests a possible boundary layer around 500 m at LaRC and at CBBT. Potential temperature profiles show largest divergence between sites in the first 500 m, with CBBT having lower potential temperature. CBBT had a relatively moderate drop in potential temperature in the first 400 m compared to LaRC. Potential temperature profile similar between CBBT and LaRC from 500 m to 5000 m with maximum difference of 2 K.

Preliminary observations suggest some potentially interesting differences in ozone mixing ratio profiles above CBBT and LaRC with some similarities in the profile. CBBT and LaRC appear to have had similar surface ozone mixing ratios (about 42 ppbv). CBBT ozone mixing ratios appear to have generally have a semi-uniform profile from surface to 2100 m, with an interesting increased ozone mixing ratio around 500 m. CBBT then increased from 50 ppbv at 2100 m to 70 ppbv at 3000 m. LaRC's profile had a general increase of ozone mixing ratio from surface to 3000 m. From 3000 m to 5000 m ozone mixing ratio at LaRC and CBBT appear to have experienced several ozone layers decreasing, increasing, decreasing, and then greatly increasing with height. The change from 85 ppbv at 3800 m to 40 ppbv at 4500 m for LaRC and CBBT is notable and worth investigation.

PLEASE NOTE: This data is preliminary and should not be used for official business until certified by NASA technical staff.

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Sonde Data: 07/26/2017 19:39 UTC (LaRC) and 19:30 UTC (CBBT)